

Even more diverse than we had thought: The multiplicity of Trans-Fly languages

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Linguistically, the Trans Fly region of Southern New Guinea is one of the least known parts of New Guinea. Yet the glimpses we already have are enough to see that it is a zone with among the highest levels of linguistic diversity in New Guinea, arguably only exceeded by those found in the Sepik and the north coast. After surveying the sociocultural setting, in particular the widespread practice of direct sister-exchange which promotes egalitarian multilingualism in the region, I give an initial taste of what its languages are like. I focus on two languages which are neighbours, and whose speakers regularly intermarry, but which belong to two unrelated and typologically distinct families: Nen (Yam Family) and Idi (Pahoturi River Family). I then zoom out to look at some typological features of the whole Trans-Fly region, exemplifying with the dual number category, and close by stressing the need for documentation of the languages of this fascinating region.

1. INTRODUCTION.¹ The distribution of linguistic diversity is highly informative, about

¹ My thanks to two anonymous referees and to Marian Klammer for their usefully critical comments on an earlier version of this paper. I gratefully acknowledge the support of the Australian National University (Professorial Setup Grant) and the Australian Research Council (Discovery Project ‘Languages of Southern New Guinea’) for supporting my fieldwork in Southern PNG, the Linguistics Society of America for support to teach a Field Methods course on Idi at the Boulder Linguistics Institute in 2011, as well as the ANRC for funding enabling me to attend the Manokwari conference, to members of the audience there for their helpful discussion, and Jeff Siegel, Christian Döhler, Grahame Martin and Garrick Hitchcock for access to unpublished materials drawn on here. Most importantly I thank my Nen and Idi teachers, particularly Michael Binzawa, †Aramang Wila, Jimmy Nébní and Wasang Baiio, for their insightful and dedicated efforts to teach me their languages. Material on Idi comes predominantly from two sources: recordings made with Wasang Baiio during a Field Methods course at the LSA Institute in Boulder, Colorado in July-Aug 2011, and material recorded from Mr Gus Iamatta (Ymta) in 2010, who at that time was the school principal at Bimadbn community school. I would also like to thank Ewelina Wnuk, Kate Miller, Rebecca Defina and Grant Aiton who during the Field

history, social configurations, and ideologies of language use. Over the last four decades of scholarship, New Guinea's position as the most linguistically diverse region of the planet has not changed, but received views of where the most deep-level diversity lies within New Guinea have moved substantially. Various versions of the Trans-New Guinea hypothesis have led to hundreds of languages centred on the cordillera being joined into a single family of (sometimes only distantly) related languages, whereas the progression of research on the Sepik has found a mosaic of small families and isolates – a pattern taken to be more representative of New Guinea as a whole before the spread of Trans-New Guinea languages.

Southern New Guinea – and more particularly that part of it known as the Trans-Fly (fig. 1)² – has not yet figured prominently in assessments of where the most diversity lies. Though it has sometimes been mentioned (e.g. Pawley 2008:51) as 'a smaller region of high diversity', existing assessments tend to lump together several families on little evidence: both Pawley (2005) and Ross (2005:30-31) essentially reproduce Wurm's earlier lumpner classification of what I will argue are several distinct families in the Trans-Fly region.

Methods course elicited some of the material cited here in small-group sessions. Material on Warta Thundai comes from a field methods course taught in February 2011 with Sembara Dibara whom I thank for his enthusiastic participation.

- ² There is no universally accepted definition of the extent of 'Trans-Fly': it tends to be well-defined at its eastern and northern extremities (by the Fly River) and to the south by the Torres Strait but, as one moves west, geographical boundaries give way to political ones, as in Williams' (1936) 'the south-west corner of Papua' (where Papua meant the [then] Australian territory of Papua). From the ecological point of view, however, it makes sense to consider the Trans-Fly Region as extending somewhat further west, taking in Kolopom Island, as is done in Fig. 1, and this is the term that has been adopted by conservationist groups like the World Wildlife Fund. For present purposes I will take it to extend across the (modern) national boundary to the Merauke River, in traditional Marind territory. Southern New Guinea is of course bigger than this, with many other linguistic groupings which I do not discuss here, such as Yelmek-Maklew, which Ross (2005) treats as non-TNG but part of a 'South-Central Papuan' family without adducing any evidence of formal cognacy across the three branches. A full discussion of these languages is beyond the scope of this article, but the existence of further groups to the west of the Trans-Fly merely amplifies the point I am making here.

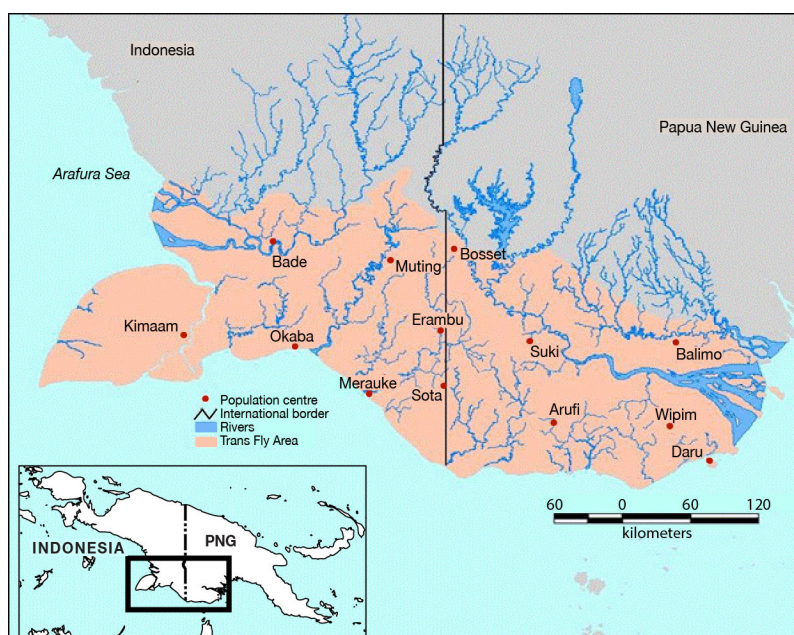


FIGURE 1. The Trans-Fly Region, as defined by the WWF (WWF Transfly Team 2006)

In this paper I will argue that Southern New Guinea in fact contains more deep diversity than has hitherto been realised, with somewhere between five and eight unrelatable families taking in forty or so languages in an area about the size of the Netherlands. On top of that, there are major typological differences between the languages of these families, and many of them (such as the Yam and Pahoturi River families) diverge significantly from the picture of a ‘typical Papuan language’ that has arisen from studies centred in the Highlands, the Sepik or the islands to the east of the New Guinea mainland. Taken together, data from Southern New Guinea significantly amplifies our view of the overall level of diversity in New Guinea.

This diversity is even more astonishing given that the region did not even exist in its present form until recently and large parts of it were underwater following mid-Holocene sea-level rises until rebuilt by progradation from sediments brought down by the Fly and Digul rivers. It is thus unlikely that all language differences currently found in Southern New Guinea developed in situ. What seems more likely is that they represent the interaction of a number of unrelated groups entering the region from different regions as it became habitable land, combined with specific features favouring diversification such as the pattern of direct sister-exchange between small groups to be discussed in §2.1.2, which is likely to have created high levels of diversity in a multilingual population coupled with a valuation of very local markers of linguistic allegiance.

I structure the paper as follows. In §2 I give a basic description of the geography and ethnography of the region. In §3 I review the main linguistic groupings, as currently

understood, then in §4 go on to give brief portraits of Nen and Idi, two languages which, although close geographical neighbours bound by relations of marriage exchange and multilingualism, diverge significantly on a wide range of measures – not only are they in different phylogenetic groups, but their typological profiles also differ markedly. But divergence of this type does not mean there are no significant areal features across Southern New Guinea, and in §5 I illustrate this point with one such feature – three-valued number systems – while emphasising that the means of composing the dual value vary significantly from one language group to another. I close the article in §6 by summarising the key scientific challenges facing linguists as we confront a zone that is simultaneously one of the most diverse and one of the least-known regions of the logosphere.

2. SOUTHERN NEW GUINEA AS A GEOGRAPHICAL AND CULTURAL REGION. In its biota, such as its vegetation of eucalypts, melaleuca, acacia and banksias combined with wallabies, bandicoots, goannas, taipans and termite mounds, Southern New Guinea is more like northern Australia than like the rest of New Guinea.

Geographically, much of it is new, low land, a kind of tropical Netherlands built up over the last few millennia as the giant Fly River to the east (fig. 2) and the Digul and other rivers to the west have carried down and deposited sediment from the central cordillera. Compared to most of present-day New Guinea and Australia (except for the Sepik), it has had a turbulent geomorphological past over the last 10,000 years. The ancient land-bridge to Australia was severed by the rising seas around 9,000 b.p., and for a while higher sea-levels than today meant that some of what is now land was then submerged, before being rebuilt by progradation.

The northern parts are characterised by vast tracts of rainforest, with only the occasional clearing for a village, swidden garden or sago (fig. 3). Moving south, this gives way to eucalytus and melaleuca savannah reminiscent of northern Australia (fig. 4), and – around rivers like the Bensbach – extensive floodplains supporting massive populations of birds, wallabies and (now) deer. There is a marked monsoonal cycle, with a long dry season (July–November) alternating with an intense wet season (December–June). The length of the wet season increases as one heads north.

Staple foods vary somewhat across the area. In the Morehead district yams and other root crops predominate, based on swidden (slash-and-burn) agriculture which yields one year of fertile soils, followed by one or two years for less demanding crops like cassava and pineapples, then gradual reversion of the cleared area to forest over around 17 years, with mature coconut trees then the only sign of prior cultivation. Languages of the region contain numerous terms for different phases of cultivation – in addition to the generic word *kkp* for ‘garden’, Nen distinguishes *gayag* ‘new garden’, *kkp get kr* ‘old garden’ and *du* ‘abandoned overgrown garden’.



FIGURE 2. Aerial view of the Fly River, taken from the southwest, with the central cordillera visible far to the north (Photo: N. Evans)



FIGURE 3. Sago clearing in rainforest between Kiriwo and Fly River (Photo: N. Evans)



FIGURE 4. Jimmy Nébni in open savannah country with mixed melaleuca and eucalyptus vegetation, southern part of Nen-speaking area (Photo: N. Evans)

In this region great social value is placed on the accumulation of yams through expert gardening, with large traditional yam-feasts (Williams 1936) and counting-ceremonies based on powers of six, along with social stipulations also reckoned in powers of six, such as that a household needs to have 1,296 (6^4) stored in its yamhouse to feed it from one year to the next. Senary power terms, representing powers of six up to 6^5 or 6^6 are found throughout the Yam family (table 1; Evans 2009) but their extremely limited occurrence outside it³ suggests that the development of this senary system is a linguistic innovation within the Yam family – either at proto-Yam level or, as Hammarström (2009) argues, at the level of the Tonda branch. We will not be able to resolve this question until better comparative data on sound correspondences is accumulated.

³ Restricted to some very limited-use terms in Agöb and Idi which appear to be borrowings.

Value	Power	Nen (base)	Keraakie	Arammba	Kanum exponential term	Agöb (Buzi village)
6	6 ¹	<i>pus</i>	<i>(eembru) for</i>	<i>nimbo</i>		<i>put</i>
36	6 ²	<i>prta</i>	<i>ferta (eembru)</i> <i>[peta]</i>	<i>feté</i>	<i>ptae</i>	<i>purta</i>
216	6 ³	<i>taromba</i>	<i>taromba</i> <i>[tarumba]</i>	<i>tarumba</i>	<i>tarwmpao</i>	<i>tarumba</i>
1,296	6 ⁴	<i>damno</i>	<i>daameno</i> <i>[dameno]</i>	<i>ndamno</i>	<i>ntamnao</i>	<i>damuno</i>
7,776	6 ⁵	<i>wärāmaka</i>	<i>werameka</i>	<i>wermeke</i>	<i>wрмаеkr</i>	<i>waramakai</i>
46,656	6 ⁶	<i>[]</i>	<i>wi</i>	<i>wi</i>		
279,936	6 ⁷		<i>meemee wemb</i>			

TABLE 1. Base-six power in some languages of the Yam family, as well as from adjoining Agöb

In the swamper, more low-lying areas around the Bensbach and Torassi Rivers, there is evidence for the earlier use of mound-and-ditch agriculture to cultivate taro (Hitchcock 2010). And as conditions get wetter to the north and northwest, making burning off more difficult, yam gardens give way to sago as the main staple. Hunting is also important throughout the region, with cassowary, wallabies, bandicoots, wild pigs and (in modern times) deer all present in large numbers; in the savannah areas fire-drives were used to hunt wallabies in much the same way as in northern Australia. According to local tradition some peoples, such as some Pahoturi River groups, were until recently hunter-gatherers rather than gardeners.

In addition to the great cordillera-fed rivers, there are numerous shorter rivers running south into the Torres Strait from the low-lying Trans-Fly plateau. Historically these were important as supplementary waterways permitting war-canoes to penetrate far into the interior, thus playing a key role in depredations effected on speakers of the smaller language groups by huge war-parties of Marind from the west (as well as Kiwais to the east and Torres Strait peoples to the south).

2.1. PRECONTACT. Colonial contact began late in the region, and it was only early in the twentieth century that the respective colonial powers (at that time the Netherlands in the west and the British in the east) began to assert some control over large and ferocious armed groups such as the Marind (aka Tugere) to the west, the Kiwai to the east, and the Suki to the north. Indeed, it was British demands to the Dutch that they take responsibility for pacifying raids carried out by peoples within the latter's territory that led to the joint Anglo-Dutch expedition in 1893 which fixed the border that has divided the island of New Guinea ever since.

There were clear discrepancies in the size of social units in the region which opposed relatively large and complex polities (numbering up to 10,000 or more) employing

expansionistic military policies to small units numbering in the hundreds at most. The Marind – described in detail in Van Baal’s (1966) classic ethnography of Dema – were the most successful of the former groups, in demographic and military terms, able to muster parties of scores of war canoes each containing 50 or more warriors. Their policies included the forming of alliances with immediate neighbours to allow them safe passage to raid groups beyond, the assimilation of non-Marind neighbours (such as the Marori and the Kanum) into an expansive system of allied clans aligned with Marind cultural norms, and the full social assimilation of children captured in headhunting raids to Marind ethnicity.

It is not hard to see how the power imbalances in this situation would have driven demographic and linguistic expansion of Marind at the expense of their smaller neighbours. The greater retention of Marind with respect to highly endangered smaller languages like Marori and Kanum in the modern era is simply a continuation of a much older dynamic. Without us yet being able to put details to this scenario, it suggests a situation where rapid expansion of some larger groups at the expense of smaller ones was interrupted by the intervention of European colonial powers – and we may not be exaggerating to say that without the arrival of colonial governments (and missionary endeavours eliminating headhunting and overt warfare) many of the small languages of the Trans-Fly may not have survived in the way they have.

A further, fascinating element in this dynamic comes from the linguogenetic affiliations of the groups involved. All of the large, expansive groups have been classified to be members of the Trans-New Guinea grouping. These include Marind (7,000 speakers), Kiwai (9,700) and Suki (3,500), though both Marind and Kiwai deviate significantly from typical Trans-New Guinea languages typologically (see footnote 4 for an elaboration of this point as it pertains to Marind), likely reflecting prior substrate linguistic influence from autochthonous Southern New Guinea languages. All of the above languages boast speaker populations an order of magnitude higher than languages in the Morehead district, with populations like 710 (Nambu), 250 (Nen) or – at the larger end, 1,600 (Idi). This is not to say that there are not also small Trans-New Guinea languages – Marori (Arka, this vol.) is a clear case, with a current population of under 40 probably reflecting a long period of restricted demography. But all the big languages in the region are Trans-New Guinea⁴,

⁴ Particularly in the case of Marind, there is evidence for significant typological assimilation to their Southern New Guinea neighbours, so it is useful to say a little more here about the Marind case.

Along with Kuni and other languages around the southern end of Lake Murray, with which it forms a clear subgroup, Marind has been considered by most investigators to be a branch of the Trans-New Guinea family (e.g. Pawley 2005, Ross 2005). Though these sources based the claim primarily on free pronouns, supplemented by a few possible lexical cognates, their argument has recently been strengthened by Suter’s (2010) findings of cognacy within the bound pronominal object system as well, on a subset of transitive verb. Suter originally based his reconstructions of this subsystem on languages of the Huon Peninsula, but has more recently extended it upward to a probable pTNG level. He reconstructs 1sgO *na-*, 2sgO *ga-*, 3sgO *wa-* and 3pl *ya-* for proto Huon Peninsula; in Marind the corresponding forms are *na-*, *ha-*, *wa-* and *e-* as illustrated by the verbs *n-esov* ‘follow me’, *h-esov* ‘follow you’, *w-esov* ‘follow him/her’ and *y-esov* ‘follow them’ (Drabbe 1955:77). As in the Huon Peninsula languages investigated by Suter, as well as in many

suggesting that this area will be a particularly fruitful place to look at the question of why and how speakers of Trans-New Guinea languages have expanded across much of New Guinea, carpeting what was presumably once a much more diverse region with relative linguistic homogeneity.

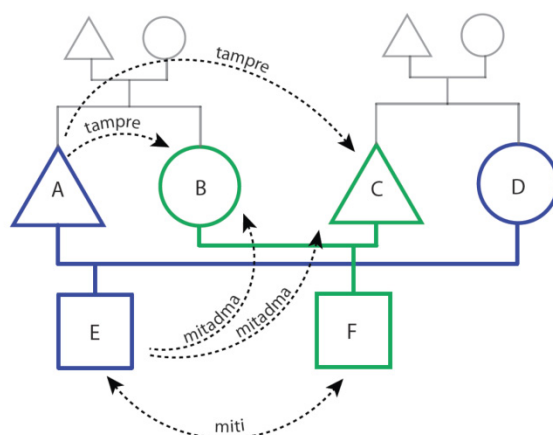


FIGURE 5. The special affinal terms that result in Nen from direct sister-exchange. Following the consummation of a full exchange, brothers stop calling their sisters ‘sibling’ and instead call them *tampre*, the term for ‘sibling-in-law’. Special terms *mitadma* and *miti* also exist for the simultaneously affinal and consanguineal relatives produced by such an exchange – *mitadma* denotes both parents’ opposite sex siblings, just in case they were a party to a direct sister exchange, and the term *miti* denotes just those cross-cousins born to such an exchange.

other TNG languages, it is only a subset of transitive verbs that take object prefixes (Drabbe 1955 lists 31).

On the other hand, two important publications (Reesink et al 2009 and De Vries 2004) place Marind outside TNG on the basis of its typological profile. De Vries (2004) suggested a link with the Inanwatan family. And Reesink et al (2009), using the Bayesian tree-building algorithm Structure, single out Marind as one of four languages in their sample (along with Inanwatan again, but also Klon and Abui of the Timor-Alor-Pantar group) which had been considered as TNG in existing classifications but which do not pattern with TNG in a profile of 160 typological characters.

The most likely reconciliation for these conflicting affiliations is that Marind is in fact a Trans-New Guinea language phylogenetically, but has undergone extensive typological reconfiguration as its ancestral speakers moved into Southern New Guinea. This would make it an interesting case of a Trans-New Guinea language assimilating structurally to substrate Papuan languages from other families. In fact, Wurm (1982:95) already suggested something along these lines: he considered Marind and its relatives, while members of the ‘Trans-New Guinea phylum’, to ‘display a number of aberrant features which are probably attributable to a strong substratum, with several of these aberrant features comparable to characteristics of languages of the Trans-Fly Stock’.



FIGURE 6. Youths from the adjoining villages of Bimadbn (Nen-speaking) and Dimsisi (Idi-speaking) transferring a load onto bicycles at an intermediate point between the two villages. They converse in an easy mixture of Nen and Idi. (Photo: N. Evans)

2.1.2 Sister-exchange and multilingualism in the Morehead Region. The Morehead region is famed anthropologically for its practice of direct sister-exchange resulting in virilocal residence (see Williams (1936) and Ayres (1984) for classic anthropological accounts). Figure 5 shows how such direct exchanges impact on aspects of the kinship terminology in Nen. Since exchanged women should come from different clans, and there is a strong chance that different clans will speak different languages, this makes it highly likely that a child's mother will have married into the village from another language background, adopting her husband's language after marriage (though possibly knowing it fairly well before through prior exposure). Since different generations in a lineage typically exchange women with different clans, this regularly brings a large set of languages into the household, and into the experience of the growing child. For example, a Nen-speaking man U may have a Nen-speaking father V who married an Idi-speaking woman W, and in turn marries a Nambu-speaking wife X. U would be expected to have good mastery of Nen (the language of his father's clan), Idi (the language of his mother's clan, whom he would visit regularly) and Nambu (the language of his wife, with whose clan he needs to maintain regular contact). It is evident that, by continually creating multilingual households in a stable and recurring way, direct sister-exchange engenders conditions that favour language contact and mutual influence (see figure 6) – we look at some of the consequences in section 5.

2.2. IMPACT OF MODERN POLITICAL UNITS ON LANGUAGE USE. The impact of modern politics on the Southern New Guinea region has had very different effects on the two sides of the border, so that it is now one of the steepest economic and demographic gradients across a national boundary to be found anywhere in the world (figs. 7, 8).



FIGURES 7 AND 8. Views looking west into Indonesia and east into PNG, from the border point at Sota in Indonesia (Photos: N. Evans)

On the PNG side, the Trans-Fly is a forgotten region – perhaps the poorest and most isolated in the country. Yet, balancing this, people retain full control of their land, according to traditional laws, and their lives depend almost entirely on subsistence activities. Though some languages appear to have become extinct in living memory, or are down to just a few speakers (e.g. Len and Rema within the Yam family), people claiming descent from these speakers have typically shifted to another language of the region rather than to an outside lingua franca.

The language ecology of typical individuals involves a substantial portfolio of languages. A man in the village of Bimadbn, for example, might speak Nen (daily language), Nambu and Idi (neighbouring languages and probably those of his wife or mother-in-law), Motu (for wider communication) and English. Tok Pisin is starting to appear at the fringe of people's repertoire, either through the church or through residence elsewhere (e.g. Port Moresby, Ok Tedi mine). Young men, in particular, have a growing interest in adding some form of basic Indonesian to this repertoire, as they travel by bicycle across the border to

acquire trade goods not available in the Morehead district itself. The overall picture, then, is of solid retention of traditional language as part of a subsistence economy, traditional land rights, and a culture of multilingualism in both local languages and those of wider communication.



FIGURE 9. Rice paddy in area of cleared melaleuca forest, between Merauke and Wasur (Photo: N. Evans)

On the Indonesian side, rapid economic development and environmental change accompanying the influx of transmigrants is proceeding at a rapid pace, and Merauke is a booming local centre. Much land has been cleared for rice cultivation (fig. 9) by transmigrants from Java and other parts of Indonesia; roads have been established and are now lined with tokos (Indonesian-style roadside stores); there are police posts in every village and houses in villages like Wasur or Poo are now mostly built by the government rather than by locals themselves. Speakers of traditional languages of the area are now significantly outnumbered by transmigrants from elsewhere in Indonesia. On the other hand, access to education, electricity, health care and the means of earning money are all far ahead of what is available on the PNG side, so much so that some young Papua New Guineans are undertaking courses, such as in agriculture, on the Indonesian side of the border. In terms of the effect on language, Yei and Kanum are both yielding to Indonesian, at different rates in different villages (e.g. when I visited Poo in 2008 the youngest Yei speaker I could find was in late middle age, whereas in Erambu there were fluent Yei speakers in their late twenties). Marind, however, seems to be holding its ground much better, reflecting the traditional dominance of the Marind-Anim in the region and this is visible in the public symbolic use of written Marind alongside Indonesian in some public signage (e.g. in the Wasur National Park), on the side of aircraft flying to Merauke, etc.

Overall language shift, then, is already reaching a critically advanced state in many languages on the Indonesian side of the border (Yei, Kanum, Marori) as young members of the community shift to Indonesian as the dominant language. On the PNG side, by contrast, the situation is currently one of stable multilingualism with a strong presence of traditional languages in all age groups.

3. MAIN LINGUISTIC GROUPINGS IN SOUTHERN NEW GUINEA. The Southern New Guinea region is home to around 40 languages split between some nine language families – representing, on our current knowledge, five or six maximal clades (i.e. unrelatable units). An indication of the relevant families (though not including all members of each family) is given in figure 10, along with a listing of sources in table 2. The spatial distribution of families suggests a sort of historical pincer movement by which Trans-New Guinea languages came down the Fly River to the north and east, and the Digul to the West, trapping the much more diverse languages of the Trans-Fly region between these rivers and the southern coast. Thus Suki/Gogodala and Tirio to the north, Kiwai to the east, and Marind (and Marori) to the west are all plausible branches of the Trans-New Guinea family.

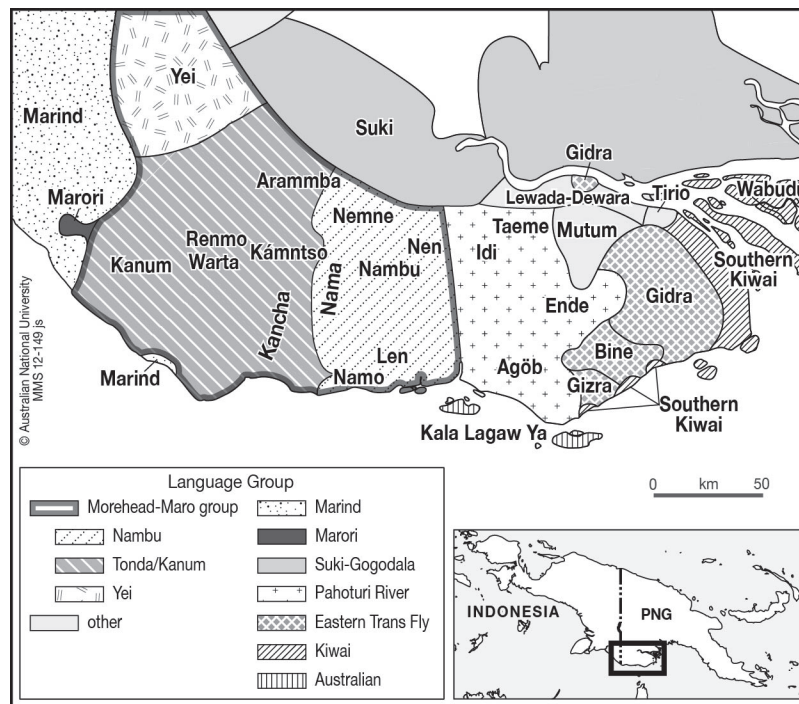


FIGURE 10. The (focal) Trans-Fly region, showing the main language groups and selected languages from each. Kanum, Yei, Tonda and Nambu are branches of the Yam (Morehead-Upper Maro) family. (Family boundaries are indicative only and need further checking)

Family	Main members	Affiliations and counter-claims	Main sources on affiliation
Marind	Marind, Yaqay, Kuni-Boazi (c. 6 languages in 3 branches)	Claimed member of TNG by numerous authors, though typological classifications place outside TNG, with Inanwatan	De Vries (2004), Pawley (2005), Ross (2005), Reesink et al (2009), Suter (2010)
Marori	Marori (isolate)	Claimed member of TNG	Ross (2005), Pawley & Hammarström (f/c)
Yam (Morehead-Maró)	Around 15 languages across three branches (Tonda, Nambu, Yei) including Nen, Kanum	Claimed subfamily of 'South-Central Family' but better regarded as independent family	Ross (2005)
Pahoturi River	4 closely-related languages or perhaps even one dialect chain: Idi, Taeme, Ende, Agob	Claimed subfamily of 'South-Central Family' but better regarded as independent family	Ross (2005)
Eastern Trans-Fly	4 languages: Bine, Gidra, Gizra, Meriam	Independent family	Ray (1923), Ross (2005)
Tirio	Up to 5 languages: Tirio, Lewada-Dewala, Atulu, Abom, Baramu	Claimed branch of TNG	Ross (2005) Pawley & Hammarström (f/c)
Suki-Gogodala	2 languages (Suki, Gogodala)	Claimed branch of TNG	Voorhoeve (1970), Ross (2005) Pawley & Hammarström (f/c)
Kiwai	Dialect network divisible into about 6 closely-related languages	Claimed branch of TNG	Ross (2005), Pawley (2005), Pawley & Hammarström (f/c)
Western Torres Strait	Dialect chain with a number of dialects (Kala Kawaw Ya, Kala Lagaw Ya, etc.)	Member of Pama-Nyungan family, Australia	Latham (1852), Alpher et al (2008)

TABLE 2. Main linguistic groupings in Southern New Guinea

To the south, in the western part of the Torres Strait, is the language known in its dialectal variants as Kala Kawaw Ya (on Saibai and other island) and Kala Lagaw Ya (on the more southerly islands), as well as simply 'the Western Torres Strait language'. This is clearly an Australian language (Alpher et al 2008; Evans 2005), though particularly in its phonology it has undergone a significant restructuring away from Australian norms.

Between the Trans-New Guinea languages to the north, west and east, and the Australian languages to the south, lie three language families which on best current evidence appear to be unrelated either to each other or to the languages which adjoin them.

The largest of these, with around 15 languages depending on how the language/dialect boundary is negotiated, has traditionally been called the ‘Morehead-Upper Maro family’, but in this article I will refer to it by the more compact term ‘Yam family’. This term is triply motivated: it recognises the importance of a significant paradigmatic alternation in establishing the relatedness of the family (3sg of ‘be’ is *yəm*; 3 nsg is *yəm* in Nen and there are cognates across the family – see Evans 2009). The lexical item *yam* or similar words is a widespread word for ‘law’ or ‘culture’ in languages of the family (e.g. Nen *yam* ‘law, tradition, culture’). And the language-family name pays tribute to the central role of yam-cultivation in the economy of most of the region. This family divides into three branches – Nambu to the east, Tonda in the middle and west (including Kanum), and Yei to the northwest.

Moving east we encounter the second family, Pahoturi River, with four very closely related varieties – Idi, Taeme, Ende and Agob – which may turn out to be a single dialect chain, or else two or more very closely related languages.

Even further east lie the languages of the Eastern Trans-Fly family (also known as the Oriomo River family) – Bine, Gidra and Gizra on the mainland, along the southern coast, up the Oriomo River and abutting the western side of the Fly River, and Meryam Mir on Murray Island in the Torres Strait, inside the Australian political boundary.

To complete our brief survey of the language families of the region, two further languages to the west of Marind bear mention – Yelmek and Maklew. Though Ross (2005) grouped these as a third branch of a putative ‘South-Central Family’ – along with Morehead-Upper Maro and Pahoturi River – it is not at all clear what this decision is based on and until we know more about these languages it seems safer to regard them as a separate and unrelated family.

The existence of so many languages and families in such a small area, namely of 4-7 maximal clades⁵ (i.e. currently unrelatable phylogenetic units), makes southern New Guinea one of the most diverse parts of Melanesia, outstripped only by the Sepik and the central North Coast. As we shall see in the next section, the diversity is not simply phylogenetic – there are major typological differences as well, even in languages spoken by interconnected neighbouring communities.

4. NEN AND IDI: DIVERGENT NEIGHBOURS. To give a feeling for how languages of the region work, as well as the balance of sameness and difference across neighbouring language families, I will briefly sketch the functioning of two languages – Nen and Idi – which belong to different non-TNG families in the region, yet are spoken in neighbouring villages and linked by close ties of intermarriage and multilingualism. Nen is the easternmost member of the Yam family, and is spoken in just one village (Bimadbn) by around 250 people, though this village represents a colonial-era aggregation of what were formerly a number of hamlets scattered over a relatively wide area. Idi belongs to the

⁵ I.e. Yam, Pahoturi, Eastern Trans-Fly, Yelmek-Maklew, Trans-New Guinea and Australian, with Marori also a possibility if it turns out not to be part of TNG. This gives a high range of 7 maximal clades, and a low range of 4 if one were to follow Ross (2005) in putting Yam, Pahoturi and Yelmek-Maklew into a single grouping.

Pahoturi River family and has around 1,600 speakers in several villages, such as Dimsisi and Sibidiri.

There are close ties between speakers of these languages, reinforced by sister-exchange across the language boundary which produces widespread knowledge of each other's languages and other interesting manifestations including place-names that are said to mix Nen and Idi elements, such as *Sugäl* (said to be comprised of Nen *su* 'belly' plus Idi *gäl* 'canoe') or *Dudumae* (Nen *Dudu* [old garden place name] plus Idi *mae* 'house'). As is the case more widely in the Morehead district, these languages are named after their respective word for 'what' (*nen* in Nen, *idi* in Idi), as if English were called *Whattish*, German *Wasisch*, French *quoiais*, and Russian *štoskij*. A variant version of these names is to use the form for 'what is it', such as *Nen Ym* [what 3sg:be] or *Idi Da* [what 3sg:be], some of the language names reported in Ray (1923) are renditions of names of this type, such as 'Nenium' (Ray 1923:334) for *Nen Ym*. The use of such shibboleth-naming is only one manifestation of a sophisticated metalinguistic awareness of structural, phonological and lexical differences found quite widely over the region.

Despite this, the languages differ significantly on many dimensions indeed, so that if Nen's relationship to its westerly neighbour Nambu is like Spanish to Portuguese or German to Dutch, its relationship to its easterly neighbour Idi is like Spanish to Basque or German to Hungarian. I will illustrate this first with a brief sketch of how each language looks on its own, then compare a number of relevant typological features more systematically.

4.1. NEN (ETHNOLOGUE CODE NQN).⁶ Nen's phonological inventory is given in tables 3 and 4. It has relatively few places of articulation, no velar nasal, a voicing contrast, and eight vowels (including a couple of short vowels, plus two marginal nasal vowels). The only somewhat unusual phonemes are the labial-velars, which are coarticulated at labial and velar places of articulation, though phonemes of this type are of course found in many other parts of Melanesia (e.g. Huon Peninsula, Onin Peninsula, Vanuatu). As in a number of other Papuan languages such as Kalam (Blevins & Pawley 2010, Donohue 2009) many syllables lack specified vowel nuclei; these are filled in with brief epenthetic schwas which are not shown in the practical orthography.

⁶ Data presented here were gathered by the author over 5 fieldtrips, totalling 15 weeks, between 2008 and 2012.

	Bilabial		Alveolar /dental		Palatal		Velar	Labial-velar		Glottal
Voiceless stop	p	<p>	t̪	<t>			k	<k>	k̠p ^w	<q>
Voiced stop	b		d	<d>			g	<g>	g̠b ^w	<ḡ>
Prenasalised stop	mb	<mb>	nd	<nd>	ndʒ	<nz>	ŋg	<ng>	ŋm̠g̠b ^w	<nḡ>
Nasal	m	<m>	n	<n>	ɲ	<ɲ>				
Voiced fricative					z ~ dʒ	<z>				
Voiceless fricative			s	<s>						h <h>
Lateral			l	<l>						
Trill			r	<r>						
Semi-vwl					j	<y>			w	<w>

TABLE 3. The Nen Phoneme inventory: consonants

	Front		Back	
	Non-short	Short	(Short) ⁷	Non-short
High	i (i)	ɪ (é)		u (u)
Mid	e (e)		ɐ (á)	o (o)
Low	æ ~ ɛ (ä)			a (a)

+ marginal ẽ in ẽ ‘yes’ and gẽhẽ ‘over there’

TABLE 4. The Nen Phoneme inventory: vowels

In terms of its grammatical typology, Nen has the following features:

(a) preference for verb-final

(b) no verb-chaining but widespread use of true subordinate constructions using a nominalised verb usually inflected for case, as in (1).

⁷ This vowel can almost be eliminated as a phoneme, except in a couple of words, *má* and *mái* ‘still’ where the presence of *á* cannot be motivated by epenthesis.

- (1) *Ynd yergb-at one-s-t w-ng-m.*
 1ABS river-AL fish.with.net-NLZR-AL 1sgU⁸:α-away-be
 ‘I’m going to the river to net fish.’

(c) use of suffixes on the final NP element to mark an absolutive-ergative case system, plus another dozen or so case distinctions. These suffixes (and also free pronouns) also encode a singular-non-singular distinction in all but the absolutive case (2). Note that ND stands for ‘non-dual’ (more on this below), and by not glossing the number of *ynd*, i.e. writing it as ‘1ABS’, I indicate that it is unspecified for number.

- (2) *togetoge-yābem ynd w-aka-ta-t /*
 children-PL.ERG 1ABS 1sgU:α-see-ND-3nsgA

yn-aka-ta-t
 1nsgU:α-see-ND-3nsgA

‘The children see me / us (3 or more).’

(d) complex verb morphology involving both prefixes and suffixes (2), and including double agreement (actor suffixes and undergoer prefixes, though sometimes a particular combination of actor and undergoer will be shown at just the suffixal or prefixal site), direction (towards, away, neutral), and diathesis (a range of valency-changing prefixes to the root). A complex TAM system combines information from the verbal suffixes (9 distinctions, 3 each for perfective, imperfective and neutral aspect), the verbal prefixes (3 distinctions coded by different series of undergoer prefixes) and preverbal particles.

(e) Monovalent verbs split in their agreement patterns, though not their case, according to whether the predicate is static or dynamic. The subjects of static verbs use undergoer prefixes (3a) and the subjects of dynamic verbs use actor suffixes and a person-invariant ‘middle’ prefix (3b).

- (3a) *Ynd w-aki-ngr* (3b) *Ynd n-owab-ta-n*
 1ABS 1sgU:α-be.standing-STAT 1ABS M:α-talk-ND:IPFV-1sgA
 ‘I am standing.’ ‘I am talking.’

The undergoer prefixes have three series, whose semantics is too complex to capture with a gloss, and for which I use the Greek letters α, β, γ. If we just look at the imperfective series, α, β, and γ work backwards from today into the future: the α-form *nowabtan* is ‘imperfective non-past’ (roughly) and refers to me talking any time from this morning’s dawn onwards (with finer specification by preverbal particles), the β-form *k-owab-ta-n* [M:β-talk-ND:IPFV-1sgA] is ‘imperfective yesterday past’ and refers to me talking

⁸ A = Actor (subject of transitive or of dynamic intransitive), U = undergoer (object of transitive, subject of stative).

yesterday or a few days ago, while the γ -form *g-owab-taw-n* [M: γ -talk-ND:REM.IPFV-1sgA] is ‘imperfective remote past’ and refers to me talking at any time before that (last month, last year etc.).

If that was all there was to the three series, glossing them would be easy. But if we look at other functions of each series the picture becomes muddier: in addition to its imperfective non-past use, the α -series is used for perfectives in the past (i.e. the direction of time-reckoning flips over in the perfective), for future imperatives (do it later!), and two of the ‘neutral aspect’ categories (which include a couple more remote pasts). The β -series, in addition to its yesterday past use in the imperfective, is used for present imperatives (do it now!), and with a few verbs for perfectives denoting unexpected occurrences. The γ -series, used for the remote past in the imperfective, is used in the perfective for futures (another time flip), as well as for mediated imperatives transmitted via a messenger (X should do it! (convey my command to X)) and for the irrealis.

Given the semantic disparities between these uses, the best treatment is to regard the choice of prefixal series plus the TAM suffix as forming a single circumfixal sign (see remarks later on circumfixal paradigms) and once we adopt that treatment the glossing difficulties vanish since the prefix series are not required to have any meaning of their own. For further remarks on this problem see Evans (forthcoming b).

(f) the existence of a large set of positional verbs (around 30), which in addition to meanings like ‘be standing’ in (3a) often have very specific semantics (e.g. ‘be in a tree fork’, ‘be immersed’), and which form the lion’s share of the stative predicates. From these, transitives (‘cause to be in position X’) and middles (‘become in position X’) are then derived. All positional verbs are prefixing verbs, in the sense of using only prefixes to signal person-agreement information.

(g) an unusual ‘constructive’⁹ number system within the verb which obtains three values¹⁰ by crossing the singular vs non-singular contrast of the agreement morphology with a dual vs non-dual contrast on the root (Fig. 11a) or the verb thematic (Fig. 11b).

⁹ The original term used for this type of system was ‘constructed’ (Corbett 2000:169) but in more recent publications (e.g. Arka 2011) the term ‘constructive’ has been used and I follow that variant here.

¹⁰ There is also an incipient but much more irregular system of distinguishing small vs large, or partial vs exhaustive plurals, which I don’t discuss here, but which underlies my reluctance to use ‘plural’ here as if it were an unproblematic term.

	U Prefix	Root patterning	Inflected form	
sg	<i>w-</i>	<i>m</i>	<i>w-m</i>	‘I am’
pl	<i>yn-</i>	<i>m</i>	<i>yn-m</i>	‘we (more than two) are’
du	<i>yn-</i>	<i>ren</i>	<i>yn-ren</i>	‘we two are’

FIGURE 11A. Unification of affixal singular vs non-singular agreement values with dual vs non-dual suppletive root of ‘be’ to give a three-valued basic number system

	U Prefix	Thematic patterning	Inflected form	
sg	<i>-n</i>	<i>nowabta</i>	<i>nowabtan</i>	‘I talk’
pl	<i>-m</i>	<i>nowabta</i>	<i>nowabtam</i>	‘we (more than two) talk’
du	<i>-m</i>	<i>nowab</i>	<i>nowabm</i>	‘we two talk’

FIGURE 11B. Unification of affixal singular vs non-singular agreement values with dual vs non-dual thematic forms of *nowab* ‘talk’ to give a three-valued basic number system; *n-* is a person/number invariant ‘middle prefix’

Though constructive number systems are not all that unusual cross-linguistically (see Corbett 2000:169-70; Arka 2011, this volume) the use of a pervasive dual vs non-dual opposition is, as far as I know, unique to Nen and its close relatives.

(h) a general tendency to exploit *distributed*, *paradigmatic*, and *constructive/unificational* architectures to give complete grammatical feature specifications.

It is *distributed* because there is a strong tendency to underspecify information at one site (e.g. giving person but not number in the absolutive pronoun forms) which is then filled in by unification with information at another site (e.g. the verb contributes number information, while the pronoun contributes person information). Complete feature value sets are not present until material from both affix positions, and from free pronouns has been unified (table 5). As can be seen, the absolutive pronouns only show person, not number – *ynd* ‘1st person abs. (any number)’, *bm* ‘2nd person abs. (any number)’,¹¹ *bā*

¹¹ A peculiarity of Nen is that the 1sg and 2sg forms, *ynd* and *bm* respectively, neutralise the absolutive vs ergative case distinction found everywhere else in the system. This appears to result from a recent sound change by which the original ergative singular pronominal suffix *-o* was lost from these pronouns as part of a general loss of word-final *o* – cf. Nama which contrasts absolutive *yənd* and *fə̃m* to ergative *yəndo* and *fə̃mo*, and Nambu which contrasts absolutive *yənd* and *bə̃m* with ergative *yənd* and *bə̃mo*. (Note in passing that the loss of final *-o* is one of the main sources of the coarticulated labial-velar phonemes in Nen – cf. Nambu *mə̃ngo* ‘house’, Nen *mŋ̃*; Nama *frango-* ‘leave’, Nen *brang̃-* ‘leave’, Nambu *ingo*, Nama *injo-* ‘catch sight of, see’, Nen

‘3rd person abs. (any number)’. Conversely, affixes reliably show number but not person: syncretisms merge the 2nd and 3rd persons in the A and U affix positions: *ya~yā-* is ‘2|3nsgU:α’ and *-e* is ‘2|3sgA’. Once free pronouns and inflected verbs are unified all ambiguities are eliminated:

	Free pronoun	talk (2 3sgA) <i>nowabte</i>	talk (2 3du) <i>nowabt</i>	talk (2 3pl) <i>nowabtāt</i>
2	<i>bm</i>	<i>bm nowabte</i> ‘you (sg) talk’	<i>bm nowabt</i> ‘you two talk’	<i>bm nowabtāt</i> ‘you (3(+)) talk’
3	<i>bā</i>	<i>bā nowabte</i> ‘(s)he talks’	<i>bā nowabt</i> ‘they two talk’	<i>bā nowabtāt</i> ‘they (3(+)) talk’

TABLE 5. Unification of underspecified pronoun and agreement information to give precise person/number specification

It is *paradigmatic* (and sometimes even *circumparadigmatic*¹²) because the information from prefix and suffix often needs to be treated as part of a single paradigm, with forms having very different values according to their place in the paradigm. Thus with ‘neutral aspect’ TAM suffixes, the suffixal pair *-nd* vs *-t* contrasts 2/3pl vs 2/3du, but their values are swapped (i.e. 2/3du vs 2/3pl) with perfective aspect TAM suffixes. Likewise the *γ*-series of undergoer prefixes indicates remote past when combined with imperfective verb suffixes, but future when combined with perfective ones.

And – intimately linked to the preceding characteristics – it is *constructive/unificational* because the full range of categories once combinations are taken into account is much greater than that found at any contrast site. Note that such unification needs to take place both within the word (e.g. between the prefixing and suffixing sites of the verbs) and between the verb and free pronouns (e.g. in working out the full person/number specifications for undergoers).

Note that these characteristics create difficulties for interlinear glossing (as they do in Idi) and I adopt the following two non-standard conventions in the examples that follow. First, I use the pipe (|) to join disjunct feature values (which are then disambiguated through feature unification) such as 2|3sg for ‘second or third person singular’ in (4.1). Second, as already mentioned above, I use Greek letters (*α*, *β*, *γ*) for contrasting prefix series without clearly specifiable semantics of their own, where this is only ‘cashed in’ after unifying this information with other parts of the paradigm (such as the suffixes).

A further salient feature of Nen, particularly important for historical and comparative

inġ- ‘see, catch sight of’. However this only occurs with final velars (the prenasalised palatal affricate *nj* in Nama results in this case from palatalisation after the preceding *i*). After other segments, such as /nd/ or /m/, final /o/ simply disappeared without trace.

¹² By which I mean that prefixes and suffixes need to be combined into a single paradigm that is only partially factorisable into separate prefixal and suffixal paradigms.

purposes, is the almost total disconnect¹³ between the form of free pronouns and that of agreement morphology for verbs: table 6 compares the absolutive and possessive free pronouns with the three series of undergoer prefixes and the actor suffixes (basic imperfective and past perfective sets). In fact, when one looks right across the Yam family there is good agreement on the form of the undergoer prefixes (see Evans 2009), less so for the actor suffixes (where contrasts are attenuated or lost the further west one goes) and little agreement on the free pronominals.

	Abs.	Poss.	U-prefix (α)	U-prefix (β)	U-prefix (γ)	A-suffix (imperf.)	A-suffix (past perf.)
1sg	<i>ynd</i>	<i>tande</i>	<i>w-</i>	<i>q-</i>	<i>ḡ-</i>	<i>-n</i>	<i>-n</i>
1nsg	<i>ynd</i>	<i>tbende</i>	<i>yn-</i>	<i>tn-</i>	<i>dn-</i>	<i>-m</i>	<i>-m</i>
2sg	<i>bm</i>	<i>bende</i>	<i>n-</i>	<i>k-</i>	<i>g-</i>	<i>-e</i>	<i>-ø</i>
2nsg	<i>bm</i>	<i>bbende</i>	<i>ya-~yā-</i>	<i>ta-~tä-</i>	<i>da-~dä-</i>	<i>-t</i>	<i>-t/-nd</i> ¹⁴
3sg	<i>bä</i>	<i>yande</i>	<i>y-</i>	<i>t-~</i>	<i>d-</i>	<i>-e</i>	<i>-a</i>
3nsg	<i>bä</i>	<i>ybende</i>	<i>ya-~yā-</i>	<i>ta-~tä-</i>	<i>da-~dä-</i>	<i>-t</i>	<i>-t/-nd</i>

TABLE 6. Free pronouns and corresponding verbal agreement forms in Nen

We will mention a few further typological features below (see also Evans forthcoming a,b), but this is now a good point to give a global overview of the language by tackling the following mini-text, which can be heard on <http://scholarspace.manoa.hawaii.edu/bitstream/handle/10125/4562/NenBlacksnakeExcerpt.wav>. It is an account of the dangers of being bitten by a Papuan Black Snake, recorded by the present author from the late Aramang Wlila (then aged in his early 60s) in September 2008.

According to the story, when a Papuan Black Snake bites you, blood starts pouring out of your eyes, and people check how bad you are by asking:

(4.1)

snamb *bnz* *aba* *ya-wakae-w-ng*
how_many fire Imm.Pst 2|3nsgU:α -see-IMPF.DU-2|3sgA>DU:IMPF

snamb *är* *aba* *ya-wakae-w-ng*
how_many person Imm.Pst 2|3nsgU:α -see-IMPF.DU-2|3sgA>DU:IMPF

‘ “How many fires did you see? How many people did you see?”

[perhaps better translated as ‘Did you see so many fires - two?’ Did you see so many people - two?]

¹³ Of the forms given in table 4, only the 1nsg undergoer prefix shows any plausible formal connection to the free pronouns.

¹⁴ Just in a couple of the perfective series the 2nd and 3rd person actor suffixes distinguish dual (here *-nd*) from plural (here *-t*).

(4.2)

a snamb kesär ya-waka-t-e
and how_many sun 2|3nsgU:α-see-IMPF:ND-2|3sg:IMPF
“and how many suns can you see?”

(4.3)

dene geä g-owab-ta-ng-a deneya[més]
thus COND M:γ-talk-IMPF-ND:FutPf-3sgA like_this
‘If he says like this:’

(4.4)

“sombes-ngama, sombes-ngama y-ng-aka-ta-n”
two-ABL two-ABL 3sgU:α-AWAY-see-ND:IMPF-1nsgA
“I see two of each.”

(4.5)

aa gn-anma-ng-a...
um 2sgU:γ-(BEN)call-ND:FutPf-3sgFutPfA
‘Um, the man will call out to you...’

(4.6)

är-t da-w-anma-nga de<neyamés>
man-PL.OBL 2|3nsgU:γ-BEN-call-ND:FutPf-3sgA like.this
‘He will call out to the people like this’

(4.7)

yna är-äm geym ti bä da-w-anma-ng-a
this man-ERG FOC ? 3ABS 2|3nsgU:γ-BEN-call-ND:FutPf-3sgA
‘The person will call the people.’

(4.8)

“tä-n-m, wgd zer-s
2|3nsgU:β-hither-be:ND proper bite-INF

aba y-ze-n-e,
IMM.Pst 3sgU:α-bite-IMPF-ND-2|3sgA
“Come, it has bitten him good and proper’

(4.9)

“a kr kaka y-m”
and death near 3sgU:α-be
“and is about to die.”

These few lines of text illustrate many of the salient features of Nen morphosyntax,

reinforcing the simplified examples given above with real textual material:

(a) **the existence of two alignment systems** – an absolutive/ergative system for case and a split-S system for agreement (on the basis of a stative vs dynamic contrast rather than an agency contrast; fig. 12). The case system is ergative/absolutive, opposing an ergative form for the agent of transitives (*ār-ām* ‘man-ERG’ in (4.7)) to an (unmarked) absolutive form for the patient of transitives (*ār* in (4.5)) and the sole argument of intransitives, whether dynamic or stative; there is also a dative for recipients/beneficiaries. The ergative is fully specialised for this function and does not mark any oblique function (e.g. instrument or source).

The verbal indexing system employs an ‘undergoer’ prefix for patients of transitives (e.g. *y-* in *yzene* ‘it bit *him*’) in (4.8)), and the sole argument of statives (e.g. *y-* in *ym* ‘he is’ in (4.9)), and an ‘actor’ prefix for agents of transitive (e.g. *-e* ‘2|3sg’ in *yawakate* in (4.2) and in *yzene* in (4.8)) and of dynamic monovalent verbs (e.g. *-a* ‘3sgFPfA in (4.3)). The ‘undergoer’ prefix (obviously the term is not perfect) is also used for the recipient or beneficiary of ditransitive verbs.

Ditransitive	Case marking Verbal indexing	Dative U-: IO	Ergative -A: A
Transitive	Case marking Verbal indexing	Absolutive U-: O	Ergative -A: A
Intransitive	Case marking Verbal indexing	Stative: Absolutive U-: S _{stat}	Dynamic: Absolutive -A: S _{dyn}

FIGURE 12. Role splits and mergers: case-marking and verbal indexing. U- and -A represent the undergoer prefix and actor suffix respectively; syntactic roles are represented by A, S_{stat}, S_{dyn}, O and IO. In addition to the roles shown here, in ditransitives there is an O, marked with the absolutive case, which is not indexed on the verb.

(b) **a split in morphological organisation between prefixing verbs** (monovalent, stative, e.g. *ym* in (4.9))¹⁵ and **ambifixing verbs** (I use this term for verbs which take both prefixes and suffixes¹⁶). The latter may be divalent like *dawanmanga* ‘he will call out to them’ in

¹⁵ The stative characterisation leaks slightly. It holds of the base form ‘be’, plus around thirty ‘posals’ giving position (be in a tree fork) or posture (be sitting). But three verbs defy the characterisation of this category as stative – ‘come’ and ‘go’, which are the ‘towards’ and ‘away’ forms of ‘be’ and hence may simply be inheriting the morphology of their source verb, but also *utan* ‘walk’.

¹⁶ A note on this terminological choice: the reason I don’t use ‘circumfixing’ here is that ambifixing allows for the possibility that choices in the prefix and suffix are independent, i.e. represent orthogonal categories, whereas circumfixing implies that material from prefix and suffix gets integrated into a single semantic value. Of course, the morphological fact of a verb being

(4.7), or monovalent and dynamic like *gowabtanga* ‘he will say’ in (4.3), as well as trivalent like ‘give’ (no examples in this text). Nen has an unusually large number of middle verbs (Evans forthcoming a), assigning virtually all dynamic one-place predicates to this class (e.g. talk, work, ascend), as well as more typical middles like (derived) reflexives and reciprocals.

(c) Four sites for encoding TAM:

Coding of tense/aspect/mood is split across

Time adverbs, all of which are bidirectional, e.g. *kae* ‘yesterday, tomorrow; one day from today’

Preverbal particles, which are unidirectional, e.g. *aba* ‘just now, very recently’ (4.1), *geā* ‘if, when’ (4.3).

Undergoer-prefix series, which have three sets encoding TAM. The semantics of these is not straightforward, and cannot be specified until they combine with TAM suffixes and preverbal particles. In our sample text, the 2|3nsgU prefix is exemplified with all three values: α form *ya-* in (4.1) and (4.9), β form *tā-* (an allomorph of *ta-*) in 4.8, and γ form *da-* in 4.6 and 4.7. As these forms illustrate, the α -series are glides or nasals, the β -series are the corresponding voiceless stops, and the γ -series are the voiced correspondents of the β -forms.

In these examples the α -series is associated with present and recent past, the β -series with the imperative, and the γ -series with the future. But things are not always so straightforward: with imperfective inflections, the γ -series signals remote past rather than future, and the β -series signals the past of yesterday or a couple of days ago.

Suffix series, expressing TAM + number + actor person/number (it is usually possible to split these further into a ‘thematic’ followed by a ‘desinence’ (see Evans forthcoming b). For ambifixing verbs, these form nine sets divisible into three aspect series (perfective, imperfective and neutral) each containing three values. (For prefixing verbs the possibilities are much more limited). The current text exemplifies some of these: the (basic) imperfective (4.1, 4.2, 4.4, 4.8), which covers all imperfective indicatives except the remote, and the future (4.3, 4.5, 4.6, 4.7).

(d) employment of infinitive forms. Nen does not have any form of verb-chaining or switch reference. Rather, it makes frequent use of infinitive forms for a whole range of functions, such as complement clauses of various types, as well as a sort of emphatic construction, exemplified in (4.8), in which the infinitive form of the verb (*zers* ‘to bite’) is combined with an inflected form (*yzene* ‘he bit it’) to mean something like ‘he really bit him’ (lit. ‘he

ambifixing does not preclude that some or all of the prefix + suffix combinations function as circumfixes, but it also leaves open the possibility that they are independent.

bit him to bite'). Infinitives are formed by adding *-s* to the verb root.¹⁷

An important use of the infinitive in Nen, not illustrated in the text fragment, is as the complement of phasals such as 'begin to V' or 'finish V-ing', expressed by combining the infinitive (suffix with an appropriate case) with a phasal auxiliary. The auxiliary carries all inflectional material that the lexical verb would have borne had it been finite – middle prefix plus actor suffix with 'return (itr.)' in (5a), undergoer prefix plus actor suffix with 'stand up (tr.)' in (5b), and undergoer prefix, benefactive prefix and actor suffix with 'give' in (5c).

(5a) *Ynd* *anġ-s-t* *n-opap-nd-m.*
 1ABS return-NLZR-AL M:α-begin-ND:PFV:PST-1nsgA
 'We are about to return.'

(5b) *Ynd* *bā* *w-nġi-s-t* *y-a-pap-nd-n.*
 1sgA 3ABS TR-stand.up-NLZR-AL 3sgU:α-CAU-begin-ND:PFV:PST-1sgA
 'I am beginning to / about to/ trying to stand him up.'

(5c) *Ahā* *Gbae* *ynd* *begta* *tande* *yép*
 here.you.are [name] 1sgA 2sg:DAT1 1sgPOSS bag(ABS)

rām-s-t *n-ng-a-wa-pap-nd-n.*
 give-NLZR-AL 2sgU-away-BEN-CAU-begin-ND:PFV-1sgA
 'Here, Gbae, I'm about to give you my bag.'

This concludes our short sketch of Nen. For comparison, we now travel about 25 km east, from Bimadbn to the neighbouring village of Dimsisi. Since there is negligible published material on languages of the Pahoturi River family, this will also give a chance to give the public at least a small glimpse of how languages in that family work.

To give an initial idea of the degree of difference between the languages, we can compare their paradigms of free pronouns, which show negligible¹⁸ resemblances; for comparison the free pronouns are also given (in blue and red respectively) for Nama and Nambu¹⁹, 40 km and 20 km to the west of Nen (table 7).

¹⁷ The 3sgA form in (4.8), *yzene*, replaces the *r* with *n*. This is a regular process with verbs whose stems end in *-r*, before non-dual. But the *r* of the imperative can be seen clearly in imperfective non-dual forms, e.g. *yzert* 'the two of them bit him', and in perfective imperatives, e.g. *tzer* 'bite him! (newly initiating the action)'.
¹⁸ One could seize on the presence of *b-* in 2nd and 3rd person forms as a vestige of possible relatedness. In other cases apparent similarities (e.g. Nen 2nsg abs. *bm*; Idi 2nsg acc. *bibim*) are coincidental in the sense that the *m* in Nen is part of the root whereas the *-m* in Idi marks accusative.
¹⁹ I thank Jeff Siegel for supplying me with these forms.

	Nen (with Nama in <small>small blue</small> and Nambu in <small>small red</small>)			Idi		
	Abs	Erg	Poss	Nom	Acc	Poss
1sg	<i>ynd</i> <small>yənd</small> <small>yənd</small>	<i>ynd</i> <small>yəndo</small> <small>yəndo</small>	<i>tande</i> <small>tane</small> <small>tande</small>	<i>ŋən</i>	<i>bom</i>	<i>bo</i>
1nsg	<i>ynd</i> <small>yənd</small> <small>yənd</small>	<i>yndbem</i> <small>yəndfem</small> <small>yəndvem</small>	<i>tbende</i> <small>təfene</small> <small>təvende</small>	<i>bi</i>	<i>ba</i>	<i>ba</i>
12nsg	<i>ynd</i> <small>yənd</small> <small>yənd</small>	<i>yndbem</i> <small>yəndfem</small> <small>yəndvem</small>	<i>tbende</i> <small>təfene</small> <small>təvende</small>	<i>ybi</i>	<i>yba</i>	<i>yba</i>
2sg	<i>bm</i> <small>fom</small> <small>bəm</small>	<i>bm</i> <small>fəmo</small> <small>bəmo</small>	<i>bende</i> <small>fene</small> <small>bende</small>	<i>be</i>	<i>babom</i>	<i>bəna</i>
2nsg	<i>bm</i> <small>fom</small> <small>bəm</small>	<i>bmbem</i> <small>fəmoferm</small> <small>bəmovem</small>	<i>bbende</i> <small>fəfene</small> <small>bəvende</small>	<i>be</i>	<i>bibim</i>	<i>bəna</i>
3sg	<i>bä</i> <small>fæ</small> <small>bæ</small>	<i>ymam</i> <small>yəmo</small> <small>yəmo</small>	<i>yande</i> <small>yəne</small> <small>yənde</small>	<i>bo</i>	<i>obom</i>	<i>obo</i>
3nsg	<i>bä</i> <small>fæ</small> <small>bæ</small>	<i>ymabem</i> <small>yəmoferm</small> <small>yəmovem</small>	<i>ybende</i> <small>yəfene</small> <small>yəvende</small>	<i>bo</i>	<i>ubim</i>	<i>oba</i>

TABLE 7. Free pronouns in Nen, Nama (small blue font), Nambu (small red font) and Idi.

4.2. IDI (ETHNOLOGUE CODE IDI). Idi is spoken in the three villages of Dimsisi, Sibidiri and Dimiri by a population of around 1,600 people. Together with three other named varieties – Ende, Agöb and Taeme – it forms the Pahoturi River Family. Compared to the Yam family, where there are substantial differences across different branches, the current (extremely limited) data suggests that all the Pahoturi River varieties are extremely close, possibly even sister dialects.

Comparing Idi and its neighbour Nen, one is immediately struck by a number of salient differences in both consonant and vowel inventories. Idi has a retroflex series of stops (/ʈ/ and /ɖ/), which are generally realised with significant affrication, at least two laterals (certainly /l/ and /ɭ/, possibly also /l̥/), and a velar nasal (lacking in Nen).

It has a smaller vowel inventory than Nen (though this part of Idi phonology is still not well understood) – cf. the contrasting phonemes /e/ and /ä/ in Nen which fall within the allophonic range of a single /ɛ/ phoneme in Idi. Current analysis suggests a six-vowel system – i, ɛ, a, ə, o, u.

The status of labial-velars is problematic. Some Idi-Nen bilinguals use labial-velar articulations in certain Idi words, which may turn out to be Nen loans. But if we limit

ourselves to phonemes used by all speakers then there do not appear to be labial-velars, though there are velars with a rather lax rounded release. The consonant inventory is shown in table 8.

MANNER / PLACE	BILABIAL	ALVEOLAR	RETRO- FLEX	LAMINO- PALATAL	VELAR	LABIO- VELAR	CO-ARTICULATED LABIAL-VELAR
Voiced stop	b 	d <d>	ɖ <ɖ>		g <g>	gw <gw>	ɡb ^w <ḡ >
Voiceless stop	p <p>	t <t>	ʈ <ʈ>		k <k>	kw <kw>	kʰ ^w <q>
Affricate/ fricative				dʒ~z <z>			
				s <s>			
Nasal	m <m>	n <n>		ɲ <ɲ>	ŋ <ŋ>		
Lateral		l <l>	ɭ <ɭ>	ɬ <ɬ>			
Rhotic		r <r>					
Continuant				j <y>		w <w>	

TABLE 8. Idi Consonant inventory (with proposed orthographic symbols in angle brackets)

In terms of grammar, there are some gross typological similarities with Nen. Both are verb-final, both inflect transitive verbs with both prefixes and suffixes, both have TAM-sensitive forms of the prefix series, and both have infinitive plus auxiliary constructions in which the auxiliary indexes all arguments of the infinitive verb. However, there are no verbs which use prefixes alone to signal subject agreement, in the way that is found with ‘prefixing verbs’ like the copula or the positional verbs in Nen: all intransitive verbs in Idi, including the intransitive auxiliary and the copula, make exclusive use of suffixation for agreement purposes.

The complex architectural relationship between free pronouns and agreement morphology also shows typological similarities to Nen: there is a severe disconnect between both the forms and the categories of free pronouns and verbal agreement, with widespread but non-correlated syncretisms in each system which require the unification of information from both free pronouns and inflected verbs before the precise feature values can be known, as we shall see from examples to be given below.

Table 9 gives the free pronoun forms plus intransitive auxiliary forms for two tenses (present and far past); note again the lack of any formal connection between the free pronoun forms and the inflected auxiliaries. Note also the lack of any formal similarity between the person/number forms of the auxiliary in Idi and those given for Nen verbs in table 5.

	NOMINATIVE	ACCUSATIVE	POSSESSIVE	INTRANS. AUXILIARY: PRES	INTRANS. AUXILIARY: PAST
1sg	<i>ŋən</i>	<i>bom</i>	<i>bo</i>	<i>wala</i>	<i>wagən</i>
1du	<i>bi</i>	<i>ba</i>	<i>ba</i>	<i>waŋama/ walala</i>	<i>gwaga</i>
12du	<i>ybi</i>	<i>yba</i>	<i>yba</i>	<i>waŋama</i>	<i>gwagma</i>
1pl	<i>bi</i>	<i>ba</i>	<i>ba</i>	<i>waŋama</i>	<i>gwaga</i>
12pl	<i>ybi</i>	<i>yba</i>	<i>yba</i>	<i>waŋama</i>	<i>gwagma</i>
2sg	<i>be</i>	<i>babom</i>	<i>béna</i>	<i>walale</i>	<i>gwege</i>
2du	<i>be</i>	<i>bibim</i>	<i>béna</i>	<i>walala</i>	<i>gwaga</i>
2pl	<i>be</i>	<i>bibim</i>	<i>béna</i>	<i>waŋama</i>	<i>gwagma</i>
3sg	<i>bo</i>	<i>obom</i>	<i>obo</i>	<i>wala</i>	<i>gwaggen</i>
3du	<i>bo</i>	<i>ubim</i>	<i>oba</i>	<i>walalo</i>	<i>gwago</i>
3pl	<i>bo</i>	<i>ubim</i>	<i>oba</i>	<i>waŋamo</i>	<i>gwagmo</i>

TABLE 9. Comparison of Idi free pronouns and inflected forms of the intransitive auxiliary (present and past forms)

In Idi, the infinitive plus auxiliary construction is much more widespread than in Nen. In Nen it is used for phasal constructions ‘begin to V; finish Ving’, and this is also the case in Idi (examples to be given later, in (12)). But in Idi its use is extended further – it is the normal construction in the present tense, for example (6a,b) – and it is only in a subset of TAM values (e.g. past perfective settings) that the main verb is directly inflected (cf. 6c,d). Note that valency alternations shown by auxiliary choice in the periphrastic construction are shown by the choice of prefix on the finite verb.

- (6a) *pelaŋ-a* *paldab* *wala*
plate-COR break:INF INTR.AUX:1|3sg:PR
‘The plate is breaking.’
- (6b) *ŋiŋim-e* *pelaŋ-a* *paldab* *yera*
girl-COR plate-DIR break:INF TR.AUX:1|3sg>3sg:PR
‘The girl is breaking the plate.’
- (6c) *ŋiŋim-e* *pelaŋ-a* *ya-paldab-en*
girl-COR plate-COR PST:sgO-break-1|3sg>npl
‘The girl broke the plate.’
- (6d) *pelaŋ-a* *wa-paldab-en*
plate-COR PST:RR-break-1|3sg
‘The plate broke.’

Examples (7) and (8) compare intransitive clauses, using the intransitive auxiliary *wala*, with transitive clauses using the transitive auxiliary *yera*. Sometimes (as in the case of (7c) vs (8c), or (7d) vs (8d)) this effects the difference between intransitive/causative or reflexive/transitive doublets. These examples also illustrate another interesting feature of Idi. A ‘core case’ marks all core nominal arguments – subjects (transitive or intransitives) and objects – even though nouns used in isolation (e.g. in nomination) appear without it, e.g. *ged* ‘child’ or *tijim* ‘girl’ (in an elicitation context). It is only personal pronouns which distinguish core arguments, via a nominative vs accusative case distinction (7b) – contrast *ɲən* ‘1sgNOM’ vs *bom* ‘1sgACC’; *bo* ‘3sgNOM’ vs *obom* ‘3sgACC’.

- (7a) *ged-e* *mél* *wala*
child-COR scream INTR.AUX:1|3sgS:PR
‘The child is screaming.’
- (7b) *tijim-e* *wala-ɲgawa* *bisi* *wala*
girl-COR forest-ALL go INTR.AUX:1|3sgS:PR
‘The girl is going to the forest.’
- (7c) *lu-e* *zang* *wala*
tree-DIR burn:INF INTR.AUX:1|3sgS:PR
‘The tree is burning.’
- (7d) *tijim-e* *oboobo tetu* *wala*
girl-DIR 3sgRR wash INTR.AUX:1|3sgS:PR
‘The girl is washing herself.’
- (8a) *ged-e* *lu-e* *kakl* *yera*
child-DIR tree-DIR climb:INF TR.AUX:1|3sg>3sg:PR
‘The child is climbing the tree.’
- (8b) *ɲən* *obom* *dəndəg* *yera*
1sgNOM 3sgACC bite:INF TR.AUX:1|3sg>3sg:PR
‘I am biting him/her.’
- (8c) *lu-e* *ged-e* *zang* *yera*
tree-DIR child-DIR burn:INF TR.AUX:1|3sg>3sg:PR
‘The child is burning the tree.’
- (8d) *tijim-e* *obo* *ged-e tetu* *yera*
girl-DIR 3sgPOSS child-DIR wash TR.AUX:1|3sg>3sg:PR
‘The girl is washing her child.’

Other case morphology includes locative *-me* (*kələm-me* ‘in the swamp’), allative *-awa* (*kələm-awa* ‘to the swamp’), ablative *-(a)t* (*walang-at* ‘from the forest’), dative *-ble* (*gəɖ-ble* ‘to the boy’) instrumental *-enda* (*sabor-enda* ‘with a spade’ (*sabor* < Eng. ‘shovel’)).

As with the verbal morphology and the free pronouns, there are no formal resemblances between the forms of any of the case suffixes and those in Nen or other languages of the Yam family (the respective forms in Nen would be locative *-an*, allative *-ta*, ablative/instrumental *-ngama*, and dative *-eita* or *-eipap*).

As in Nen, Idi organises its agreement morphology in a way that requires unification of featural information from free pronouns and inflected verb before all feature combinations are resolved. For example the present tense form of the intransitive auxiliary includes such syncretisms such as *wala* [1|3sgSubj], which is resolved once combined with the free pronouns: *ɲən bisi wala* ‘I go’, *bi bisi wala* ‘he/she goes’ (cf. 7b). Likewise the transitive auxiliary *yera* ‘to do to something’ includes many forms with a large syncretic range such as *ɲeralā* ‘1nsg|12nsg|2nsg>du; 2nsg>1pl; 1nsg>2pl’.

Syncretisms in the Idi paradigm extend much further than in Nen, collapsing large sets of combinations in underspecified blocks. Consider the immediate past, as it applies to finite transitive verbs. Prefixes simply distinguish singular object (*na-*) vs non-singular subject (*ɲa-*), while suffixes distinguish a range of categories defined by person and number. Examples in (9), from the near past (same day) paradigm illustrate how the combinations get disambiguated once free pronouns are added. (The time adverb *sisiri ektende* ‘earlier today’ could optionally be added to any of these.) As these examples show, the inflected verb forms *na-ndəg-la* (singular object) and *ɲa-ndəg-la* (non-singular object) are compatible with a very wide range of subject/object combinations for person/number – in these combinations, the second person needs to be non-plural (i.e. singular or dual) whereas first persons need to be non-singular (i.e. dual or plural). (9a-c) illustrates some of these possibilities with a singular object, signalled by the prefix *na-*, and (10a-10d) with a non-singular object, signalled by *ɲa-*. (To avoid over-complex glossing here I use one value set for 2nd person and another for non-2nd, allowing for prior disambiguation by the free pronoun.)

- (9a) *bi komlebe bom na-ndəg-la.*
 2NOM two 1sgACC TOD.PST.sgO-see-2nplA>sgO
 ‘You two saw me (earlier today).’
- (9b) *be komlebe obom na-ndəg-la.*
 2nsgNOM two 3sgACC TOD.PST.sgO-see-2nplA>sgO
 ‘You two saw him (earlier today).’
- (9c) *ybi ɲayebibi obom na-ndəg-la.*
 12NOM many 3sgACC TOD.PST.sgO-see-1nsgA>sgO
 ‘We (you, me and others) saw him/her (earlier today).’
- (10a) *bi komlebe bibim ɲa-ndəg-la.*
 1nsgNOM two 2nsgACC TOD.PST.nsgO-see-1nsgA>nsgO
 ‘We two (excl.) saw you (non-singular) (earlier today).’

- (10b) *bi komblebe obim ña-ndəg-la.*
 1nsgNOM two 3nsgACC TOD.PST.nsgO-see-1nsgA>nsgO
 ‘We two (excl.) saw them (earlier today).’
- (10c) *be komblebe bim ña-ndəg-la.*
 2nsgNOM two 1nsgACC TOD.PST.nsgO-see-2nsgA>O
 ‘You two saw us (exclusive) (earlier today).’
- (10d) *ybi komblebe obim ña-ndəg-la.*
 12nsgNOM two 3nsgACC TOD.PST.nsgO-see-1nsgA>nsgO
 ‘We two (inclusive) saw them (earlier today).’

As in Nen, diathetic changes such as reflexive/reciprocal are signalled by verbal prefix. The verb *boku* ‘cut’ (far past stem *kon*), for example, normally takes various forms of prefix according to object values (e.g. *gakon* for ‘I cut you (sg)’, *bekon* for ‘I/her cut him/her’). But the reflexive/reciprocal employs a person/number invariant prefix form *gwa-*, along with a person-sensitive reflexive pronoun formed by the possessive pronoun plus *dagəmənde*, e.g. *oba dagəmənde* ‘themselves’, or a reciprocal/reflexive pronoun formed by reduplicating the possessive pronoun (e.g. *baba* ‘ourselves (exc.)/ each other’). Examples are:

- (11a) *ɲən bo-dagəmənde gwa-ko-n tətəm*
 1sgNOM 1sgPOSS-REFL RR:RemPst-cut-1|3sgA yesterday
 ‘I cut myself yesterday.’
- (11b) *be bene-dagəmənde gwa-ko-ya tətəm*
 2NOM 2sgPOSS-REFL RR:RemPst-cut-2sgA yesterday
 ‘You cut yourself yesterday.’
- (11c) *bi baba gwa-ko-ma tətəm*
 1sgNOM 1nsgRR RR:RemPst-cut-1nsgA yesterday
 ‘We (exclusive) cut each other yesterday.’
- (11d) *bo komblebi obaoba gwa-ko-yo tətəm*
 3NOM two 3nsgRR RR:RemPst-cut-3duA yesterday
 ‘They two cut each other / themselves yesterday.’

To conclude this brief sketch we illustrate the use of infinitive verbs inflected for case in phasal complements, which parallel Nen in their structure. The phasal auxiliary agrees with both arguments of the verb, and the infinitive, placed before it, is inflected for an appropriate case, such as the allative in constructions meaning ‘to be about to’ (12a,b).

- (12a) *Bi babom koko-awa deada nalala*
 1plNOM 2sgACC cut(INF)-ALL be.about.to Tr.AUX:1nsg>2sg
 ‘We two are about to cut you.’

- (12b) *ŋən* *bibim* *komblabe*
 1plNOM 2nsgACC two
- koko-awa* *deada* *ñere*
 cut(INF)-ALL be.about.to Tr.AUX:1sg>2du
 ‘I am about to cut you two.’

As stated earlier, though claimed as related to Nen and the other Yam languages by such earlier classifications as Wurm (1982:182-4, inside his ‘Trans-Fly Stock’), and Ross (2005), a more sober assessment of the present evidence does not find support for this position, and it seems more prudent to consider the Pahoturi and Yam families as unrelated (as always, pending evidence to the contrary). None of the morphological paradigms which are probative of genetic relationship show significant resemblances between Nen and Idi – free pronoun, bound pronominal affixes to the verb, or case suffixes.

4.3. NEN AND IDI: A BRIEF TYPOLOGICAL COMPARISON. Nen and Idi, as mentioned above, belong to totally distinct language families, but are linked by strong ties of intermarriage and bilingualism. They show an interesting mixture of typological convergence and divergence which I briefly summarise here.

Firstly, there are significant convergent features. These include:

(a) the employment of both prefixing and suffixing on transitive verbs, with the prefix basically used for the undergoer and the suffix basically used for the actor, though with some leakage. The use of both prefixes and suffixes on the verb is in fact widespread though the Southern New Guinea region, being found in Eastern Trans-Fly languages like Meryam Mir (Piper 1989), in Marind (Drabbe 1955), and in Marori (Arka this volume), as well as throughout the Pahoturi River and Yam families.²⁰

However, the functions of the prefix and suffix slots in these languages are different from what we find in Nen and Idi. In Marind both actor and undergoer arguments are generally cross-referenced by prefixes only (leaving aside one specialised construction which uses undergoer suffixes). In Marori only suffixes are employed for agreement on lexical verbs – it is just the auxiliary that uses both prefix and suffix slots. And in Meryam both arguments are cross-referenced by the prefixes, except for some number marking effected by suffixation. To the south and north, the Western Torres Strait language (Pama-Nyungan; Australian) and Suki (Trans New Guinea) are exclusively suffixing. In this sense, the shared pattern of U-prefixation and A-suffixation between Nen and Idi (and more generally between the Yam family and Pahoturi River languages) is significant.

(b) the existence of underspecified or disjunctive semantic values for these verbal affixes, which means that the verb plus free NPs need to be unified before person/number values are resolved. The level of underspecification, however, is much greater in Idi than in Nen.

(c) the location of coding site for argument agreement alternates between finite main

²⁰ The use of prefixes and suffixes is also found elsewhere in New Guinea – for example, in Goroka-Kainantu languages of the Trans-New Guinea family.

verb in simple constructions and auxiliary verb in non-finite constructions. Auxiliary constructions are more extensive in Idi than in Nen. This reflects the fact that in Idi they are the basic construction in the present, and the auxiliary indicates ongoing aspect (as well as serving as a light verb for many verb lexemes) whereas in Nen the auxiliary is reserved for phasal constructions (begin to, finish).

(d) both languages are verb-final, but this is so widespread in New Guinea that it has little or no distinctive value.

Passing now to divergent features, which are much more numerous, the most significant among them are:

(a) the different organisation of case, both on pronouns and on nouns. Nen has an absolutive/ergative system throughout (apart from the neutralisation of absolutive and ergative for 1st and 2nd singular pronouns); Idi has a nominative/accusative system for pronouns and a highly unusual system opposing a 'direct' case (used in A, S and O functions) to a zero form (used in nomination, and nominal predicates).

(b) Nen lacks an inclusive/exclusive distinction; Idi has one.

(c) Nen forms its infinitives by suffixation to the stem (e.g. \sqrt{esr} 'descend', *esrs* 'to descend'); Idi forms its infinitives either by reduplication (e.g. \sqrt{tme} 'close', *tmetme* 'to close, closing'; \sqrt{ko} 'cut', *koko* 'to cut, cutting'), by using the bare stem (e.g. \sqrt{trem} 'open (tr.)', *trem* 'to open, opening'), or introducing some other modification to the stem (e.g. \sqrt{ndog} 'burn' *dong* 'to burn').

(d) Nen has an indigenous power-based senary system; in Idi these are extremely marginal and clearly borrowed

(e) Nen has a rich set of postural/positional verbs – about thirty verbs with meanings like 'be the end of something', 'be up high', 'be wedged', 'be in a tree fork' and so on – which have a cluster of distinct morphosyntactic characteristics and are a central part of the grammatical system. Idi appears to have no such phenomenon.

(f) in the unmarked case – absolutive for Nen, nominative for Idi – Nen doesn't distinguish number for any person, whereas Idi distinguishes number for all persons except second

(g) the dominant person syncretism within the Nen verbal agreement system is second person with third (not unusual in Papuan languages), whereas in Idi it is first person with third (much more unusual), as exemplified in many examples in (6), (7) and (8).

(h) in terms of phonological inventories, Nen has no velar nasal, no retroflexes, a single lateral, and a coarticulated labial-velar series. Idi has a strikingly 'Australian' phoneme inventory, with initial velar nasals, a retroflex series, and two laterals – some speakers have coarticulated labial-velars in some loanwords but otherwise this series is absent.

Short and incomplete as it is, this list should demonstrate how many typological isoglosses separate Nen from Idi, and show that widespread bilingualism and intermarriage between speakers of these two languages has not produced strong convergences of structure (although there are a few, as outlined). At the present stage of research it is too early to tell whether this bespeaks relatively recent contact, or rather indicates that long-standing contact has left the basically different typological profiles of the two languages (and language families) untouched.

5. AREALITY IN SOUTHERN NEW GUINEA: THE CASE OF THE DUAL. Despite the significant typological variety of the languages found in Southern New Guinea – something illustrated

in a very localised way by the comparison of Nen and Idi in the last section – there are some common typological themes running through the whole region (see also Reesink & Dunn, this issue). In this section I focus on just one – the presence of dual number on the verb, which runs through the region from Marori (Arka this issue) in the west to Kiwai in the east (Ray 1932), though apparently not in Marind, as far as I can determine from Drabbe (1955) who only mentions singular and plural. In fact, most languages of the region have an additional number distinction – adding a trial or paucal, or extending the plural up to a large plural. But for reasons of space I skirt that additional complexity here, since my goal is to focus on the rather different ways that the same result – a grammatical category expressing dual number on the verb – can be put together in interestingly different ways in different families.

One of Greenberg’s well-known universals about morphological categories states that:

No language has a trial number unless it has a dual. No language has a dual unless it has a plural. (Greenberg 1963)

A morphological consequence one might expect from this would be that duals are built up from plurals. This is indeed the case in many languages, e.g. the pronominal object prefix system in Biniñ Gun-wok (Evans 2003), and it is found in some languages of the Southern New Guinea region. The Idi copula provides a clear example: the singular form is *da*, the plural is built up from this (*dag*), and the dual in turn is built up from the plural (*dago*).

A second possibility is to first distinguish singular from non-singular, then to distinguish dual from plural in an equipollent way, i.e. there is no obvious way of deriving either non-singular form from the other. Kala Kawaw Ya is an example of this strategy. Taking the perfective form of the verb ‘cut oneself’ as an example, the singular adds the vowel *-i* to the root (plus final *-z*) whereas the non-singulars add *-e*. The non-singulars then add suffixes from a pair where neither has a claim for priority: dual *-man* vs plural *-min*. This gives the three form series sg *pathiz*, du *patheman*, pl. *pathemin*.

A third possibility is to have a category merging singular and dual (let us call this non-plural) and cross it with a singular vs non-singular distinction. This system is found in Hopi, for example (Hale 1997). Within the southern New Guinea region it can be exemplified from the paradigm of ‘to be’ in Warta (Thundai), a language of the Tonda branch of the Yam family. In the present tense, the root for ‘be’ is *-iyene* in the non-plural but *-ərei* (1st) or *-ero* (2nd/3rd) in the plural, while the pronominal prefixes are organised on a singular vs non-singular basis. This is illustrated in table 10.

		Singular				Non-singular	
		1 w-	2 n-	3m s-	3f w-	1 n-	2 3 ø/y-
be:NPl	-iyene	<i>wiyene</i> 1sg:be	<i>niyene</i> 2sg:be	<i>siyene</i> 3sg.m.be	<i>wiyene</i> 3sg.f.be	<i>niyene</i> 1du.be	<i>iyene</i> 2 3du.be
be:Pl	-ero					<i>nərei</i> 1pl.be	<i>yero</i> 2 3pl.be

TABLE 10. Composing the dual of ‘be’ in Warta Thundai by crossing singular vs non-singular and non-plural vs plural distinctions.

A fourth possibility, already illustrated for Nen in §4.1, is to derive a three-way number system by crossing a singular vs non-singular with a dual vs non-dual system. This is highly unusual typologically, but found in several languages of the Nambu branch of the Yam family. Nama, for example (Siegel 2012), has a very similar system to that found in Nen (table 11). Illustrating with the actor suffixes of the past perfective tense, and using the verb *injoy* ‘to catch sight of’ prefixed for 3sg undergoer, we obtain the following paradigm. A singular vs non-singular organisation of the actor suffixes crosses with a dual (-*ea*) vs non-dual (-*ø*) organisation of the thematic element appearing between the verb stem and the past tense suffix -*y*.

	1sgA: - <i>n</i>	2 3sgA: - <i>ø</i>	1nsgA: - <i>m</i>	2 3nsgA: - <i>nd</i>
nd - <i>ø</i> -	<i>yinjoyn</i>	<i>yinjoy</i>	<i>yinjoym</i>	<i>yinjoynd</i>
du - <i>ea</i> -			<i>yinjoeaym</i>	<i>yinjoyeaynd</i>

TABLE 11. Partial verb paradigm for the past perfective of *y-injo-* -*y* [3sgU-catch. sight.of-_-PstPerf-_-] ‘caught sight of it’ (Siegel 2012). Thus *yinjoyn* is ‘I caught sight of it’, *yinjoeaym* is ‘we two caught sight of it’, etc.

Intriguingly, this pattern is not confined to the Nambu languages. Within the Eastern Trans-Fly branch, Meryam Mir (Piper 1989) exhibits a very similar pattern, though the distribution of information is different: the singular vs non-singular contrast is found in the free pronouns, while the dual vs non-dual contrast is found in the pronominal prefixes. There are two further interesting twists: the dual is also used for paucals²¹ and many verb stems supplete on a singular|dual vs paucal|plural pattern. Two views of the workings of this system are illustrated in tables 12 and 13 (data from Piper 1989:127); note that (*r*)*edi* is the present-tense suffix to the verb, *e* and *wi* are the third singular and third non-singular free pronouns, and (*i*)*mi* and (*e*)*mr* are the singular|dual and paucal|plural stems of ‘sit’.

	sg pl <i>ø</i> -	du pauc <i>na</i> -
sg du (<i>i</i>) <i>mi</i>	<i>imiredi</i> ‘he is sitting’	<i>na-miredi</i> ‘they (two) are sitting’
pauc pl (<i>e</i>) <i>mr</i>	<i>emredi</i> ‘they (pl) are sitting’	<i>na-mredi</i> ‘they (pauc) are sitting’

TABLE 12. ‘Sit’ and number in Meryam Mir. Inflected verb only; all four numbers, showing suppletive stem.

²¹ Though these terms are not used in descriptions, it would make sense to talk of an ‘outer’ vs ‘inner’ contrast in number, where outer is singular or plural, and inner is dual or paucal.

	sg/pl <i>ø-</i> ,	du/pauc <i>na-</i>
3sg <i>e</i>	<i>e ø-imiredi</i> ‘he is sitting’	
3nsg <i>wi</i>	<i>wi ø-emredi</i> ‘they (pl) are sitting’	<i>wi na-mredi</i> ‘they (pauc) are sitting’

TABLE 13. ‘Sit’ and number in Meryam Mir, showing interaction with free pronouns but omitting paucal.

From the examples considered in this section, it is clear that having a dual category on verbs is a clear typological feature of the Southern New Guinea region. However, the means by which languages build this up span a radically varied range of methods (including some extremely rare ones typologically), suggesting a large number of individual convergence pathways brokered by a common semantic target. Further consideration of this question – taking into account more languages, more patterns within each (for the sake of exposition I have picked particular illustrative patterns which are by no means the only ones in a given language), and the further complications brought in by a fourth number – is likely to reveal an even more intricate set of developments. It may also suggest earlier contact scenarios – is it possible that the presence of such similar but typologically unusual ways of constructing the dual in the Nambu branch of the Yam family and in Meryam Mer from the Eastern Trans-Fly family reflects an earlier period of contact between those families, with the Pahoturi River languages being a later intrusion? Until we get more data on the various languages involved it is too early to answer this question.

6. DOCUMENTING THE LANGUAGES OF SOUTHERN NEW GUINEA: CHALLENGES AHEAD.

The main purpose of this article has been to give a small taste of how much interest and diversity is presented by the languages of Southern New Guinea, in terms of their structures, sociolinguistic settings and historical and areal trajectories – for more detail than could be given here, the reader is referred to Evans (forthcoming a,b). As pointed out in the introduction, our knowledge of virtually every language of the region is extremely basic, even by the standards of New Guinea in general, which is in its turn the least-documented part of the world linguistically. Getting data on these varied and unusual languages is therefore of the highest scientific priority.

In terms of the urgency of the task, the status of the languages is very different according to the country concerned. In Papua New Guinea most of the languages are reasonably secure and are being transmitted to children despite the small speaker-populations, though there are nonetheless individual languages within the Yam family which are close to extinct (e.g. Len, said to be down to just one speaker) or receding from use (e.g. Rema, around Weam near the Indonesian border). In Australia, the sole Papuan language (Meryam Mir) is only spoken by people of middle age or above. Likewise in Indonesia, many of the languages – Marori, Maklew²², Yei and Kanum are all clear examples to varying extents

²² Cf. this quote on the status of Maklew, from Lebold et al (2010:25): ‘The people who speak the Maklew language seem to be a small group. They also seem much less proud of their language and culture than the Marind people do. The adults in Welbuti complained to the survey team that their children do not speak their language and sometimes make fun of them for using it. The

– are only spoken by people of middle age or above and are significantly endangered. Marind is often said to be in better shape, but there have been no recent detailed studies of the language which could verify this. As these examples make clear, documentary work on languages on the Indonesian side of Southern New Guinea is a particularly urgent priority.

Beyond that, a closer study of the whole Southern New Guinea region will plainly lead to many discoveries – of a host of undescribed linguistic phenomena, of the dynamics of village multilingualism and its effects on language change, of the forces that drove the expansion of Trans-New Guinea languages, of a complex process of relatively recent colonisation as the land was built up over the last few millennia, of contacts between Papuan and Australian languages across the Torres Strait, linked by an Australian language (Kala Kawaw Ya / Kala Lagaw Ya) in the Western Torres Strait and a Papuan language of the Eastern Trans-Fly family in the Eastern Torres Strait (Meryam Mir).

At present, the only reasonable-sized published grammars we have for the whole region are a bunch of papers for the Western Torres Strait language (see Ford & Ober 1991 for onward references), an unpublished MA Thesis for Meryam (Piper 1989), and relatively complete but now outdated grammars from an earlier era for Kiwai (Ray 1932) and Marind (Drabbe 1955). For the Yam family, the Pahoturi River family, all other members of the Eastern Trans-Fly family, for Suki and other TNG languages along the southern bank of the Fly, we have minimal documentation. Finally, the fact that the languages of Southern New Guinea depart in so many ways from what we have come to regard as ‘typical’ of Papuan languages will have the salutary effect of making us realise that Papuan languages are even more diverse than we had thought – however difficult it is to grasp these even greater levels of diversity.

There are currently a number of projects under way on languages of the Trans-Fly. These include Marori (Wayan Arka), Nen (this author), Nama (Jeff Siegel), Kámnozo (Christian Döhler), Warta Thundai (Kyla Quinn), Taeme (Philip Tama), Kanum (Matthew Carroll), Ranmo (Jessica Thiessen) and Suki (Charlotte van Tongeren). However, this still leaves a large number of languages in urgent need of research, and I hope this article will lead other scholars to undertake work in this fascinating and little-known region.

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children themselves reportedly do not speak the vernacular, although they are able to understand it. This was a concern to the adults because they were afraid their language would die out; they said their language would not be spoken anymore in 20 years. Nevertheless, the survey team did notice some older women who only spoke the vernacular language and were not able to speak Indonesian.’

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